

## LESSON 2.3 • Proportions and Measurement Systems

---

1. a.  $n = 30.48$                       b.  $n = 322.06$   
c.  $n = 127.96$                       d.  $n = 655.74$
2. a. 25.4 cm                      b. 140 in.  
c. 1.4 mi                      d. 63,360 in.  
e. 6441.6 m                      f. 91.5 m
3. a.  $\frac{1 \text{ kg}}{2.2 \text{ lb}} = \frac{2.5 \text{ kg}}{x \text{ lb}}; x = 5.5$   
b.  $\frac{1 \text{ kg}}{2.2 \text{ lb}} = \frac{x \text{ kg}}{170 \text{ lb}}; x \approx 77.3$   
c.  $\frac{1 \text{ kg}}{2.2 \text{ lb}} = \frac{51 \text{ kg}}{x \text{ lb}}; x \approx 112.2$ . So 51 kg is heavier.  
d.  $\frac{1 \text{ kg}}{2.2 \text{ lb}} = \frac{x \text{ kg}}{160 \text{ lb}}; x \approx 72.7$
4. a. 9.07 m/s; 29.74 ft/s                      b. 700 in.  
c. 23.13 yd; 7.27 kg                      d. 6.21 mi  
e. 42,222.7 m; 322.5 m/min